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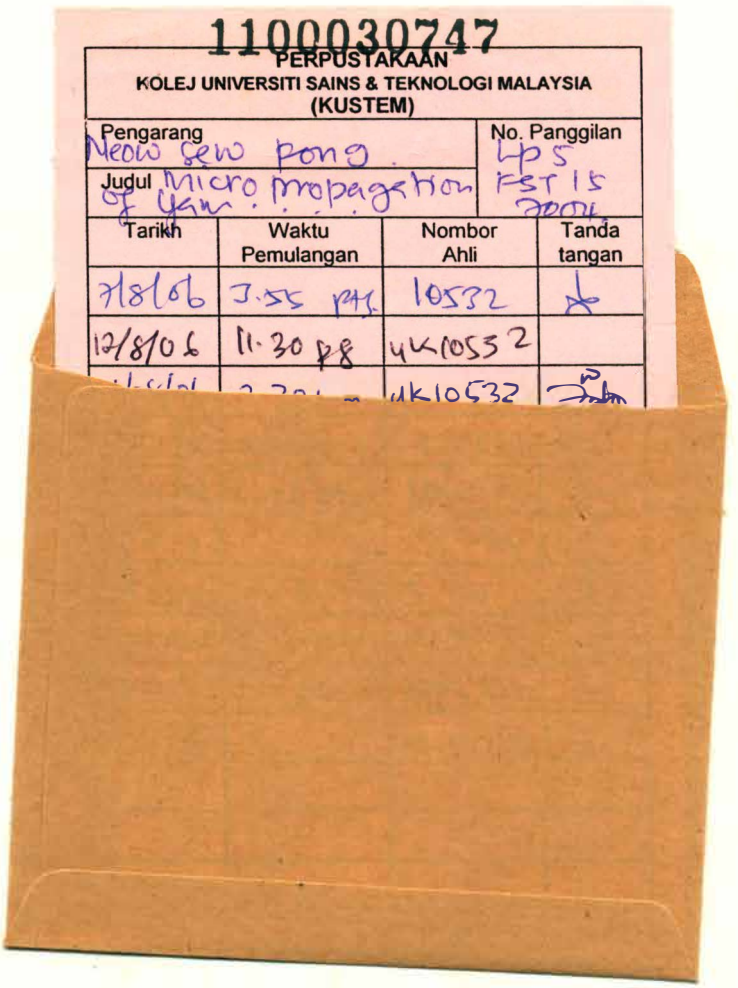

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(KUSTEM)

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Microprogation of Yam (Dioscorea alata) variety in Malaysia by tissue culture technique / Neow Sew Fong.

Lihat sebelah

MICROPROPAGATION OF YAM (*Dioscorea alata*) VARIETY IN MALAYSIA BY TISSUE CULTURE TECHNIQUE

By

Neow Sew Fong

Research Report submitted in partial fulfilment of the requirements for the degree of Bachelor of Applied Science (Biodiversity Conservation and Management)

Department of Biological Sciences
Faculty of Science and Technology
KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA
2004

JABATAN SAINS BIOLOGI
FAKULTI SAINS DAN TEKNOLOGI
KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA

PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk Micropropagation of Yam (*Dioscorea alata*) Variety In Malaysia by Tissue Culture Technique oleh Neow Sew Fong, No Matrik UK 5526 telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah Sarjana Muda Sains Gunaan (Pemuliharaan Dan Pengurusan Biodiversiti), Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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TABLE OF CONTENTS

ABSTRAK

Pembiakbakaan Yam (*Dioscorea alata*) Di Malaysia Dengan Teknik Tisu Kultur Objektif kajian ini ialah kaji teknik pensterilan yang sesuai untuk pucuk dan tuber yam. .Yam selalu diserang oleh bacteria, virus dan kulat maka kultur yam yang bersih amat penting. Langkah penting dalam proses penghasilan kultur yam ialah aseptik teknik Agen pensterilan yang digunakan dalam kajian ini ialah Clorox yang mengandungi 5.25% (v/v) Natrium Hypochorite. Kajian pensterilan pucuk dijalankan dengan menggunakan rawatan 10%, 15%, 20% kepekatan Clorox disertai masa rawatan 10, 15, 20, 25, 30 minit masa perendaman. Dalam kajian ini, rawatan yang menggunakan 15% kepekatan Clorox disertai 25 minit masa peredaman adalah paling sesuai untuk pensterilan pucuk. Bagi ubi, rawatan pensterilan yang paling sesuai ialah penggunaan 100% Clorox disertai 30 minutes masa perendaman.

ABSTRACT

The objective of this study was to optimize the sterilization technique for shoot tip, axillary bud and tuber explants of Yams for tissue culture. An aseptic technique for clean planting material is required since Yams are always affected by pathogen, viruses and fungus. The sterilization agent used in this study was Clorox which contained 5.25% (v/v) Natrium Hypochorite. The Clorox concentration for axillary bud and shoot tips treatment was started from 10% until 20% and immersion time in Clorox was from 10 minutes to 30 minutes. In this study the treatment with 15% concentration of Clorox and 25 minutes immersion time was the most appropriate treatment for sterilization shoot tips and axillary bud. For tuber, the most highest percentage of the explants free from contamination was obtained from the treatment with 100% concentration of Clorox and 30% minutes immersion time.